SUBMISSION TO THE ENERGY RESOURCES CONSERVATION BOARD ON RESOURCE DEVELOPMENT AND POSSIBLE CONFLICTS WITH URBAN DEVELOPMENT IN THE WEST EDMONTON AREA

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Edmonton Metropolitan Regional Planning Commission
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1. INTRODUCTION

The Edmonton Metropolitan Regional Planning Commission (E.M.R.P.C.), within its mandate as the land use planning authority in the region, is pleased to participate in the Energy Resources Conservation Board (E.R.C.B.) inquiry into resource development and the possible conflicts with urban development in the west Edmonton area.

Our submission is organized to follow the terms of reference outlined by the Board in its memorandum of Decision, Pre-inquiry Meeting, Proceedings 821213, dated December 23, 1982 which cited the following matters to be reviewed:

"(a) prospective plans of mineral owners for further resource related developments in the areas;

(b) prospective plans of developers or other parties for urban developments in the area;

(c) ways in which resource related surface facilities might be made more compatible with urban developments; and

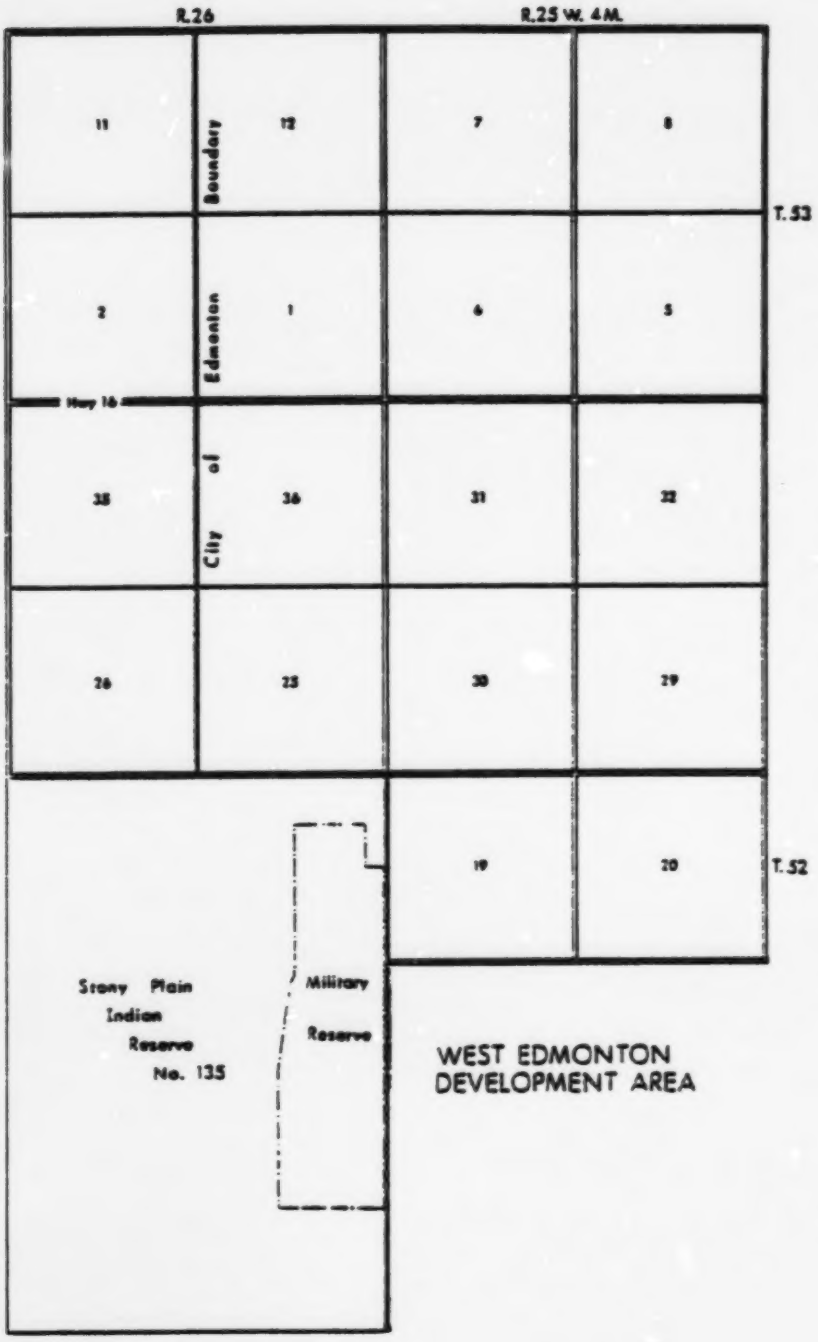
(d) other related matters which are considered appropriate."

The inquiry study area (see Map 1) involves a number of land use planning jurisdictions: the City of Edmonton, the County of Parkland, the Stony Plain Indian Reserve (the Enoch Band) and the Edmonton Metropolitan Regional Planning Commission. The E.M.R.P.C. as regional planning authority in the area is very interested in participating with the Board and affected municipalities in developing an acceptable strategy which would balance the need for continued resource exploration and development of the Acheson and Acheson East Field with the staging of urban development in a compatible, land efficient and environmentally safe manner.

2. THE COMMISSION'S MANDATE

Regional planning is the broadest level of land use planning in Alberta. With the regional plan as its principal mechanism, this level of planning provides for the efficient and orderly use of land on a regional scale. Regional planning also provides an important basis and framework within which local municipal planning can take place.

The E.M.R.P.C. presently has in effect the Regional Plan - Metropolitan Part. Within the inquiry study area, all lands within the municipal boundaries of the City of Edmonton are covered by the Regional Plan - Metropolitan Part (the Stony Plain Indian Reserve and the County of Parkland are not included). The adopted plan provides the legislative mandate for the activities of the Commission as a regional land use planning agency as specified under the Planning Act. In this capacity, the Commission has adopted policy positions on



MAP I

E.R.C.B. INQUIRY STUDY AREA

various issue areas affecting regional planning, including transportation, pipelines and powerlines and urban and rural settlement.

The E.M.R.P.C. has currently prepared and is circulating to its member municipalities a draft of The Proposed Edmonton Metropolitan Regional Plan. This document covers the entire region and is intended to guide land use and development in the region beyond the turn of the century and establish a framework for inter-municipal and local municipal planning. The Proposed Edmonton Metropolitan Regional Plan contains objectives and policies guiding the future development of the region and more specific policies on a number of topic areas, including energy utility development.

The E.M.R.P.C. recognizes that its involvement in resource related matters is limited to that of a commenting agency pursuant to the E.R.C.B.'s Directives. In commenting on applications for new oil and gas facilities and/or operations, the Commission limits its discussions to Regional land use planning and policy matters, identification of possible impacts (land use, environmental, economic, health, safety, etc.) and to suggestions regarding mitigating measures. This submission will attempt to follow the same format in its discussion of future resource development and possible conflicts with urban development in the west Edmonton area.

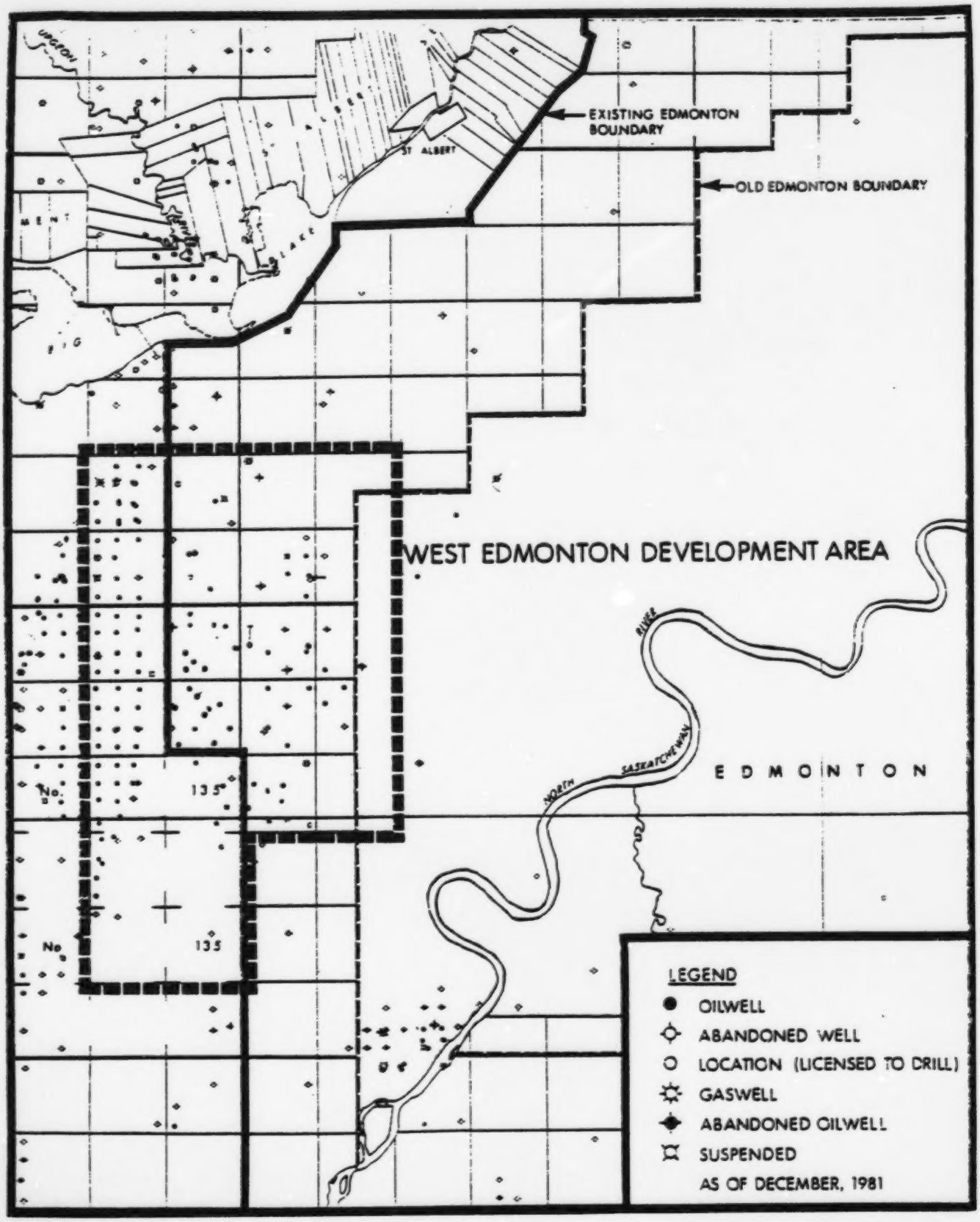
3. FUTURE RESOURCE RELATED DEVELOPMENTS

The E.M.R.P.C. has no direct information which could assist in determining future plans for resource developments in the study area. However, several observations and comments can be made on the subject of continued energy resource developments in highly urbanizing areas. Map 2 provides an illustration of the large number of oil and gas facilities in the inquiry study area.

The E.M.R.P.C. has accepted the principle that the integration of urban land uses and energy resource activities can occur successfully if there is co-operation between all parties and an agreed upon and enforced set of rules/standards for resource operators and proponents of urban development. Additional guidelines are needed in urbanizing areas to reduce the potential for conflict between resource activities and urban uses. Health, safety, environmental compatibility issues for example, will become more crucial in higher density urban areas.

The Energy Resources Conservation Board, is the appropriate agency to develop additional regulations for oil and gas operators and to co-ordinate the sequencing of energy recovery in those resource fields which intrude into urban areas.

The staff of the E.M.R.P.C. suggest several principles be considered by the E.R.C.B. when balancing the need for resource utilization within urban municipalities while recognizing that the same land area is scheduled for urban development.



OIL and GAS FACILITIES

MAP 2

3.1 Priority - Which Comes First?

In determining the priority between the energy operators and proponents for urban development, the answer must be based on the recognition of the ultimate use and disposition of the land. In urban areas, urban development should be recognized as the priority activity; and energy resource operations are an interim land use. Where issues of conflict cannot be resolved, decisions must be in favour of the long term land use.

Planning for the long term use avoids building-in short term compromise measures which may have costs which extend over the longer term. Consistency between plans can be assured by allowing efficient staging of investments (roads, utilities, public services, etc.) to serve the long term use. This approach recognizes that resource extraction by its very nature is only a temporary land use.

The issue of priority does not negate the opportunity for co-existence and compatibility between both land users. As suggested earlier in this submission, such co-existence can occur as long as there are an agreed upon and enforced set of performance standards and regulations for both land users. Regulations respecting setbacks from residential development, fencing and sign standards, fire and safety procedures, access to resource sites and permitted hours of operations are typical of the subject areas for which regulations need to be developed.

3.2 Resource Management Plans

The E.M.R.P.C. supports the preparation of resource management plans by mineral owners and operators in co-operation with the Energy Resources Conservation Board.

A resource management plan or strategy for the inquiry study area would provide: a framework for future prospects of resource related developments, a context for individual resource development applications and an agreed upon staging outline for resource extraction prepared on a comprehensive basis for public agency review. The integration of resource management plans and area structure plans in the planning process could only result in more effective and realistic land use plans cognizant of the resource industry requirements and future plans.

The applicability of such plans should not be limited to this inquiry study area, but rather should be considered as part of the normal planning process and required where existing and future resource developments are in competition and/or conflict with planned urban development and expansion.

3.3 Consolidation of Oil and Gas Lines

Accepting the principle that oil and gas operations in the inquiry study area are interim uses, efforts should be directed to encourage certain practices on the part of the resource company which could enhance the compatibility of resource related facilities with urban development and encourage efforts for intensified resource extraction.

Several measures to achieve compatibility would be to limit the number of non-inter-connected flow lines for oil and gas, to encourage the use of existing centralized gathering systems, and to reduce the number of new feeder lines crossing the site area. All new flow lines should be located in alignments adjacent to and paralleling existing networks. Reducing the number of flow lines that have to be relocated later at the time of detailed subdivision design stage should be strongly pursued by all parties. Provisions should be made available for allowing multi and joint use of existing easements and rights-of-way.

3.4 Consolidation of Resource Facilities and Operations

The consolidation of resource facilities and operations including drilling, pumping, storage and processing operations should be co-ordinated and regulated by E.R.C.B. for the inquiry study area. By reducing the number of single well battery sites, oil tank storage areas, gas flaring operations and new processing plants, the impacts of oil and gas operations on urban development can be reduced.

The Commission recommends that oil and gas operators utilize existing well sites for all new drilling and that future battery sites be limited to existing sites or planned industrial development areas. Consolidation of batteries in other locations would result in a significant improvement to facility layout and simplify the installation of pipeline connections. Proposals for a new gas processing plant should be directed away from the immediate study area planned for residential development and directed towards consolidating existing operations at the Inter-City Gas Plant (Section 2-53-26 W4th) as a more suitable site area.

Transportation of oil and gas products should be limited to a specific number of truck access routes to centralized facilities to limit potential conflict between resource owners and future residential landowners.

3.5 Abandoned Facilities

All past and future facilities which have or will be abandoned need to be identified by an accurate land survey. Documentation should be made available as to how the facilities were capped, sites restored and when flow lines were removed.

3.6 Enhanced Recovery

The Commission suggests that, if possible, shortening the life span of oil and gas fields in urbanizing areas should be pursued. New quotas or the use of enhanced recovery methods as technical solutions should be examined.

3.7 New Well Development

In order to reduce conflict between land users and provide a safeguard for urban development all new well developments should be limited to the use of existing well sites and the remaining spacing units indicated by the E.R.C.B., retaining central targets on all diagonal and direct offset locations. In addition, operators should be encouraged to use directional drilling of follow-up wells from a single surface pad.

4. PROSPECTIVE PLANS OF DEVELOPERS OR OTHER PARTIES FOR URBAN DEVELOPMENTS IN THE AREA

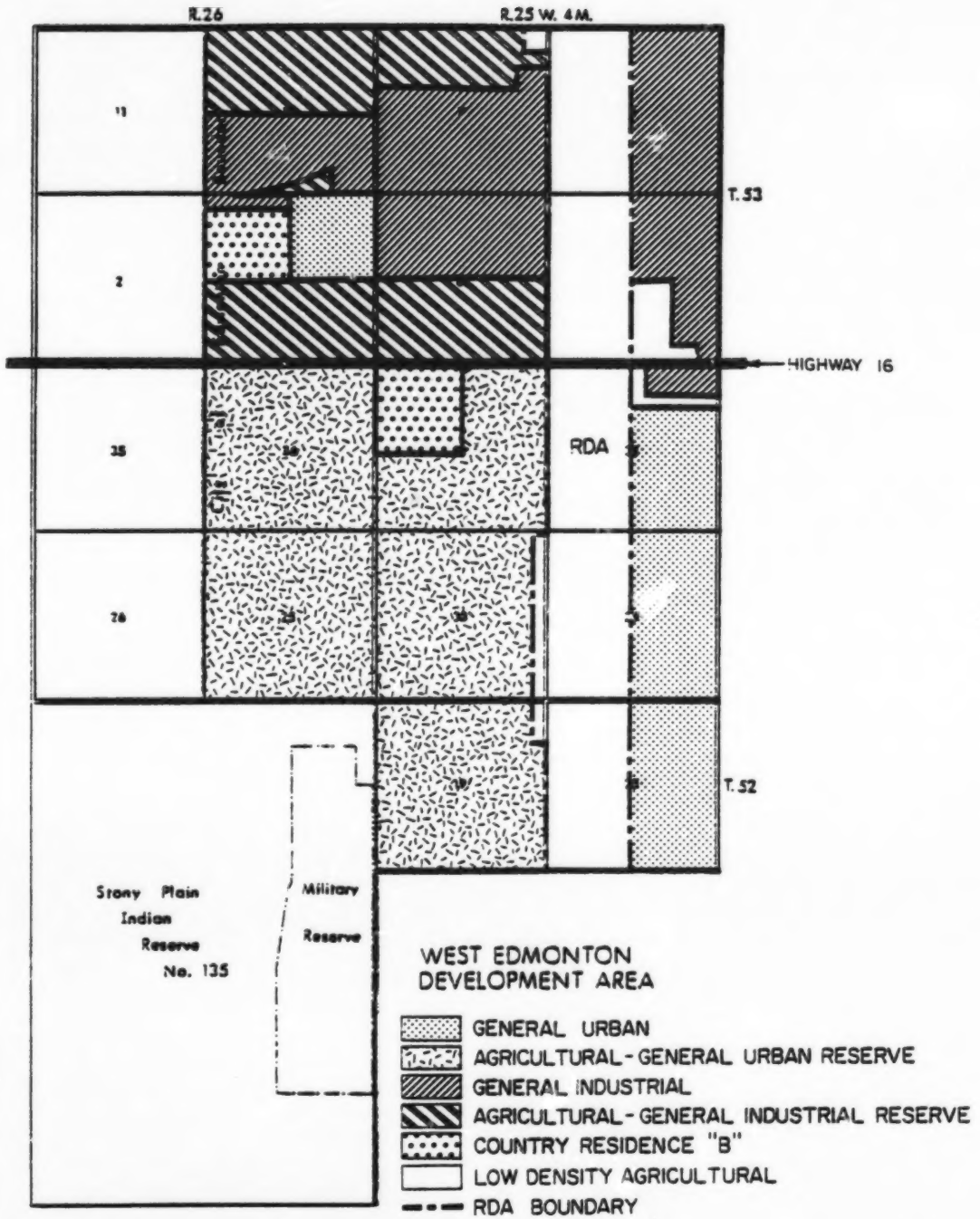
For the purposes of this submission, discussions on future plans for urban development in the inquiry study area will be limited to aspects of regional land use planning.

In order to eliminate some duplication of evidence at the hearing our submission will highlight existing and proposed regional land classification for the inquiry study area.

4.1 Current Zoning Under Regional Plan - Metropolitan Part

Map 3 illustrates the regional zoning in place at the time of this submission. South of Highway 16, Sections 36, 31, 25, 30, 19-52-25-W4th are classified as Agricultural - General Urban Reserve land use class. The northwest corner of Section 31-52-25-W4th is classified as country residential "B", suitable for permanent country dwellings and ancillary market gardening and similar small scale agricultural pursuits. This site area refers to Normandeau Gardens, a country residential subdivision and the only major development area south of Highway 16 within the inquiry study area.

The general purpose of urban reserve classification is to reserve those agricultural lands on the periphery of metropolitan development, and to prevent premature subdivision and development of land that is prospectively suitable for general urban use. The Urban Reserve Zone is intended to provide sufficient land for a minimum of 15 years. A change from Agricultural - General Urban Reserve to General Urban shall be considered as an amendment to the plan and subject to the required amendment procedure which will include the preparation of an outline plan as a prerequisite.



REGIONAL PLAN – METROPOLITAN PART MAP 3

NOTE : This zoning applies only within City of Edmonton boundaries

In general terms, north of Highway 16, Sections 1, 6,12, 7-53-25-W4th are classified as Agricultural - General Industrial Reserve or General Industrial.

The general purpose of both of these zones is to reserve those agricultural lands on the periphery of metropolitan development and to prevent premature subdivision and development of land that is prospectively suitable for industrial use. The Industrial and Agricultural - Industrial Reserve Zone is intended to provide sufficient land for a period far beyond the minimum of 15 years. A change from Agricultural - General Industrial Reserve to General Industrial shall be considered as an amendment to the plan and subject to the required amendment procedure.

Within this same area, the north half of Section 1-53-25-W4th is classified as country residential "B" and general urban, which includes Westview Village Mobile Home Park in addition to a highway commercial cluster at the intersection of Highway 16 and Winterburn Road.

The Regional Plan - Metropolitan Part does not cover portions of the inquiry study area in the County of Parkland, Sections 11, 2, 35, and 26. These land areas are covered by municipal zoning designations, south of Highway 16 as Industrial Commercial Reserve District and north of Highway 16 as Industrial Commercial District.

4.2 Recent Amendment to Regional Plan - Metropolitan Part Within the Inquiry Study Area - Lewis Farms Area Structure Plan

The E.M.R.P.C. held a public hearing in January 1983, pursuant to Section 49 of the Planning Act R.S.A. 1980 for the purposes of considering the application #479 to amend the Edmonton Regional Plan - Metropolitan Part (for the purpose of allowing the Lewis farm area structure plan to proceed), as follows:

(a) Agricultural - General Urban Reserve to General Urban:

S.1/2 36-52-26-W4th
S.1/2 31-52-25-W4th
25-52-26-W4th
30-52-25-W4th (except R.D.A.) - (760 ha±/1,900 ac.±)

(b) Agricultural - General Urban Reserve to General Industrial:

N.1/2 36-52-26-W4th
N.E. 31-52-25-W4th - (188 ha±/470 ac.±)

(c) Country Residential "B" to General Industrial:

N.W. 31-52-25-W4th - (60 ha±/150 ac.±)

The general location of the amendment can be noted on Map 5 and Map 7. Bounded by Highway 16 on the north and Restricted Development Area on the east side, it is referred to as the Lewis Farms area.

The above amendment received the following Commission decision at January 12, 1983 meeting:

"(a) Lands proposed for amendment from Agricultural - General Urban Reserve to General Urban - that the Commission NOT ADOPT this amendment since the City of Edmonton has not shown that these lands are required for development within the General Urban time frame. Carried (2/3 Majority).

(b) Lands proposed for amendment from Agricultural - General Urban Reserve to General Industrial - that the Commission ADOPT this amendment. Carried (2/3 Majority).

(c) Land proposed for amendment from Country Residential "B" to General Industrial - that the Commission ADOPT this amendment. Defeated.

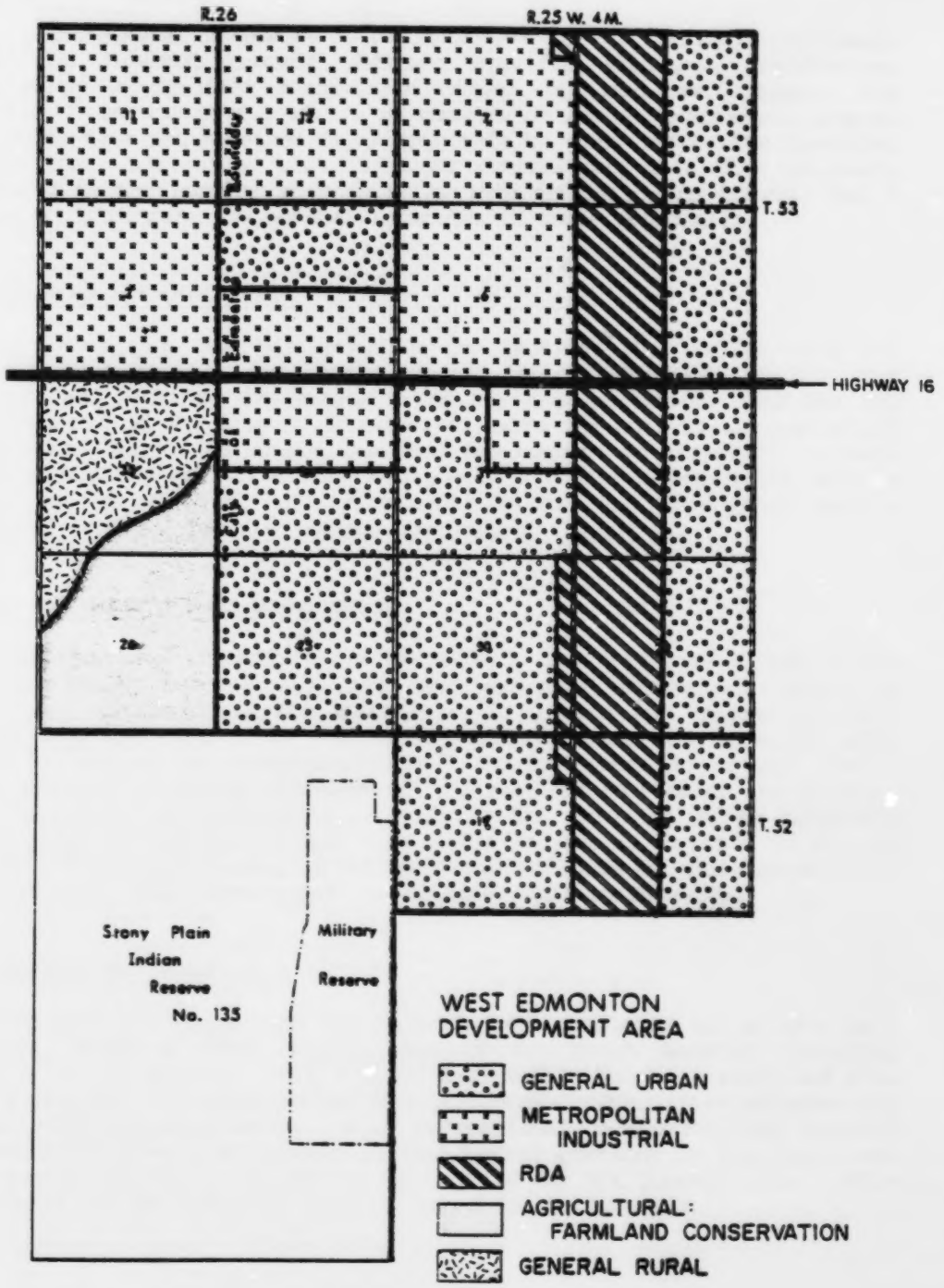
The application is now submitted to the Alberta Planning Board for a decision. Additional details respecting procedures for amendment are highlighted on the flowchart, Map 6 in the appendix.

4.3 Proposed Edmonton Metropolitan Regional Plan

The Proposed Edmonton Metropolitan Regional Plan, currently in public review stages, contains in the plan document a Composite Regional Land Use Map. This map identifies a broad basis for land use decisions within the context of regional goals and priorities and provides a co-ordinated and consistent framework for municipal plans and land use bylaws by identifying future directions for growth. The map identifies a 20-25 year supply of land for development.

In general terms the recommended future pattern of development for the inquiry area is identified on Map 4, and is described as follows:

- General Urban for lands situated south of Highway 16 and within the City of Edmonton's boundaries.
- Lands classified as Metropolitan Industrial are situated north of Highway 16 extending into the County of Parkland and the City of Edmonton and a small portion immediately south of Highway 16 within the City's boundaries.
- The remaining sections of land in the County of Parkland included in the inquiry study area are identified as Agricultural Farmland Conservation and General Rural categories.



COMPOSITE REGIONAL LAND USE MAP MAP 4

SOURCE: The Proposed Edmonton Metropolitan Regional Plan

REFERENCE: Map 4

4.4 Additional Comments

Within the general framework of regional land classification, municipalities are directed towards defining specific standards, regulations pertaining to detailed subdivision design and land use bylaws. The E.M.R.P.C. is not in a position to comment on future development proposals which have not received final approvals by their respective approving authorities, but rather will highlight several proposals that are being advanced in the inquiry study area as information to the board. Map 5 helps to illustrate the general locations of these proposals.

Lewis Farms Area Structure Plan

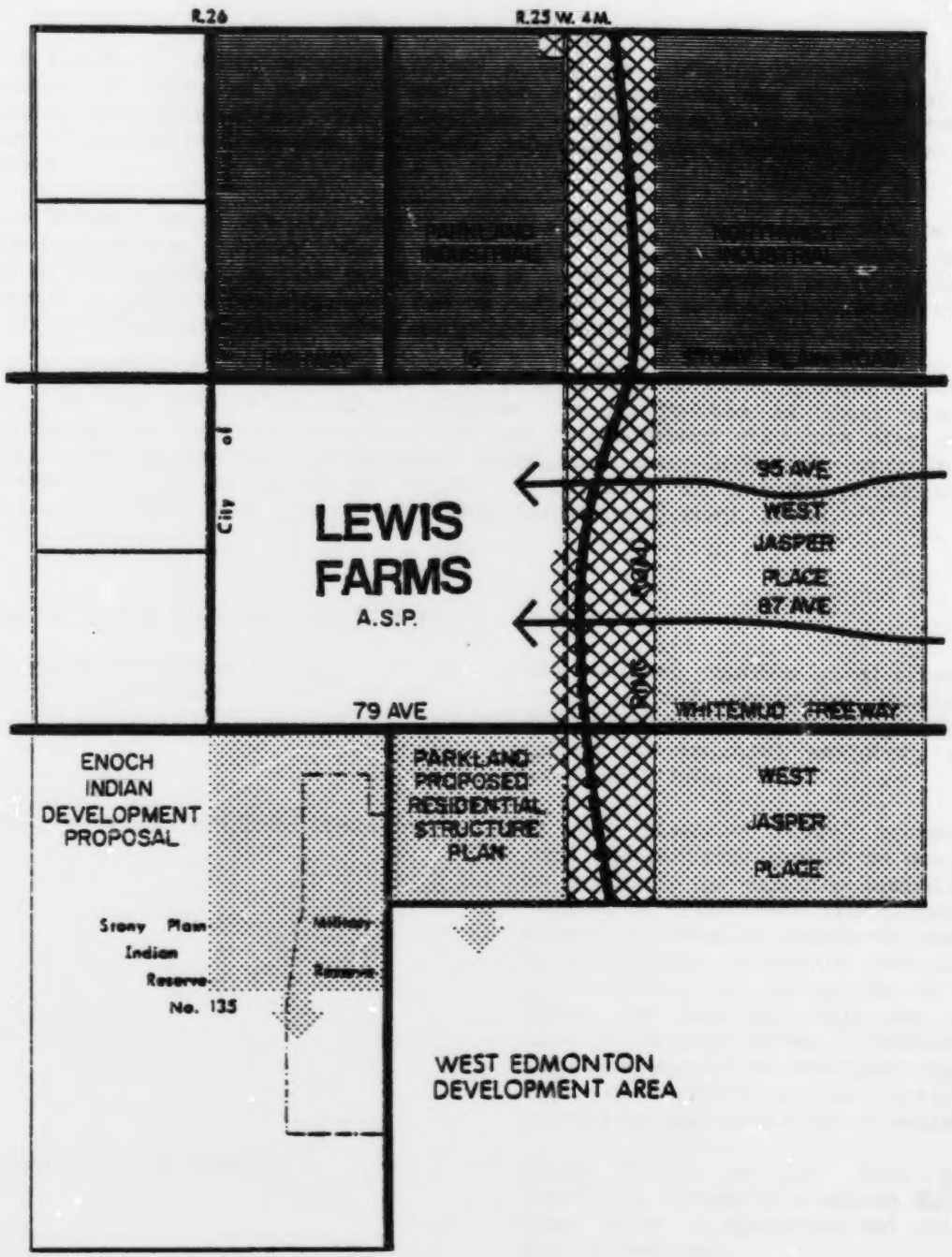
An area structure plan has been prepared for Sections 30, 31-52-25-W4th and 25, 36-52-26-W4th by the Lewis Farms owners' group. The proposal for four sections of land provides for extension of the transportation, land use and servicing network of the City of Edmonton to serve the anticipated population of approximately 42,000 persons. The land use concept is primarily residential with supporting facilities and services. A business industrial area is identified for the north of half of Sections 36 and 31. Additional details can be viewed on Map 7 featured in the appendix of the report.

Enoch Band and Genstar Land Development

A development proposal covering three sections in the northeast corner of the Stony Plain Indian Reserve #135 has been submitted to various levels of government for discussion by the Enoch Band of Indians and Genstar Corporation. The land use concept is predominantly residential with nodes of mixed commercial throughout the development area. Two employment nodes were identified, one south of 79 Avenue and other in the southern portion of the project. Municipal services and transportation systems are intended to be connected with development in the City's west side. The project is expected to satisfy demands for residential housing up to the year 2001 with an anticipated population of 18,000. Full development is expected in 15 to 20 years.

Parkland Development Proposal

The Parkland area structure plan has recently been completed for an area west of the RDA, south of 79th Avenue, east of the Enoch Reserve, including Sections 19, 18, 17 and the N.W.1/2 of 6-52-25-W4th. The area structure plan includes a proposal for establishing four residential communities encompassing a total of eight neighbourhoods. Major recreational, commercial and institutional facilities have been located in the central portions of the plan area. A population projection of ±51,000 is anticipated for the concept area. Additional details can be viewed on the site Map 8 in the Appendix.



FUTURE URBAN DEVELOPMENT MAP 5

5. WAYS IN WHICH RESOURCE RELATED SURFACE FACILITIES MIGHT BE MADE MORE COMPATIBLE WITH URBAN DEVELOPMENT

The E.M.R.P.C. staff comments reflect a land use planning perspective on the subject of potential conflicts and issue areas between two diverse and competing land activities. Where possible, measures have been suggested for the use of mitigating measures to reduce potential impacts between the two land users.

The formulation of specific performance standards and operating guidelines for the oil and gas industry should be undertaken by E.R.C.B. As suggested earlier in this submission, the preparation of resource management plans and development of performance standards can be a first step in the integration of oil and gas activities within urban municipal boundaries.

Similarly where urban development is proposed to co-exist alongside surface oil and gas facilities, municipalities can incorporate in their planning processes (at the area structure plan and neighbourhood structure plan level) integrated guidelines, performance standards, safeguards and controls for present and future operations related to drilling for and the production of oil, gas and/or other substances within staged development areas.

Issues at the Plan Approval Process

Defining Site Areas for Oil and Gas Operations	- the smallest possible sized sites for drilling and operating should be identified by means of a legal designation on municipal statutory plans as utility lots.
Protection for Continued Operations	- at the planning stages compatible land use patterns should be designed in proximity to existing operations. Staging of urban development, setback standards, density standards need to be identified. A staging plan should be identified for the removal of flow lines, new drilling wells and location of battery sites. Performance standards should be developed regarding the completion of drilling, redrilling and reworking of wells.
Industrial Type Traffic	- plans should be put into place regarding, access to resource facilities, hours of operation and collection procedures.

Emergency Plans	- plans should be prepared for emergency response to fires, explosions and possible spills. Policies should be prepared on the right of entry into facilities.
Protection for Adjacent Landowners	- owners of land adjacent to pipelines or well sites should be notified and potential impacts should be documented for their use.
Aesthetics and Visual Appearance	- specific performance standards should be developed for oil and gas facilities and their site areas. Regulations respecting cleaning up of sites, painting of buildings and uniform fencing and lighting standards, should be considered.
Noise	- operators of oil and gas facilities in urban municipal areas should adhere to the City's noise bylaw regarding hours of operation and noise levels. - the replacement of gas driven pump motors with electric motors on wells operating in urban areas should be enforced. - increased measures for noise attenuation on drill rigs and pumps operating in urban areas need to be considered.
Odour and Air Quality	- no burning or flaring of gas should occur in urban areas.
Health and Safety of the Public	- oil and gas facilities and their site areas should be appropriately fenced, warning signs posted and patrolled for security. Potential hazards from fire, explosion, dangerous equipment leaks of toxic substances need to be safeguarded against by specific performance standards and regulations. - installation of leak detection systems and air quality monitoring stations are required in urban areas. - the establishment of education programs alerting the public to the dangers associated with oil and gas operations need to be incorporated as part of the planning process.

Health and Safety of the Public	- specific minimum separation distances from various facilities (well sites, batteries, pipelines, storage areas) should be identified at the planning stages. Setback requirements can increase public safety levels and promote successful co-existence.

6. SUMMARY STATEMENTS

This submission has identified the need to recognize the long term use of land when examining the question of resource utilization within urban municipalities. Urban development should be recognized as the priority activity; and energy resource operations are an interim land use.

The issue of priority does not negate the opportunity for co-existence and compatibility between both land users. Efforts should be directed to encouraging certain practices on the part of resource companies in order to enhance the compatibility of resource related facilities with urban development. This submission suggested: preparation of resource management plans, consolidation of oil and gas lines, consolidation of resource facilities and operations are possible measures to reduce adverse impact on adjacent urban uses.

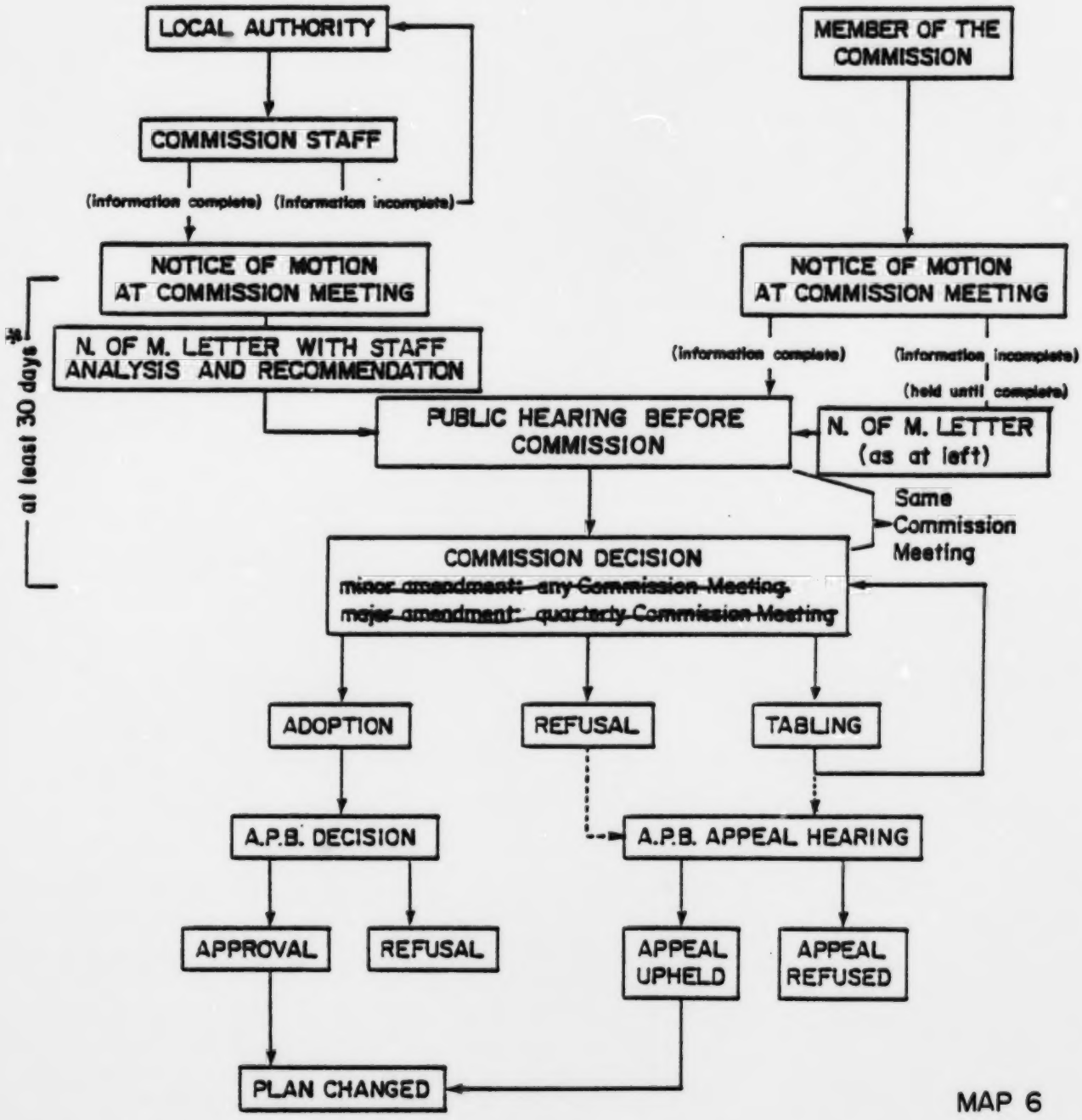
The last portion of our submission discussed measures which can be incorporated into the urban development and subdivision approval process to ensure that mitigation measures are incorporated into proposed plans.

There are a few unresolved issues including, ownership of facilities and operations in urban areas, who has the responsibility for the enforcement of standards and regulations; and who is responsible for additional expenditures to improve the co-existence between two land users.

In conclusion, the Edmonton Metropolitan Regional Planning Commission would like to see the Energy Resources Conservation Board form a special study group to review the points raised at this hearing and prepare a set of recommendations for public review. The E.M.R.P.C. will be happy to participate in future refinements of policies directed towards the integration of oil and gas operations within areas planned for urban development and expansion.

APPENDIX

PROCEDURE FOR APPLICATIONS FOR AMENDMENT



MAP 6

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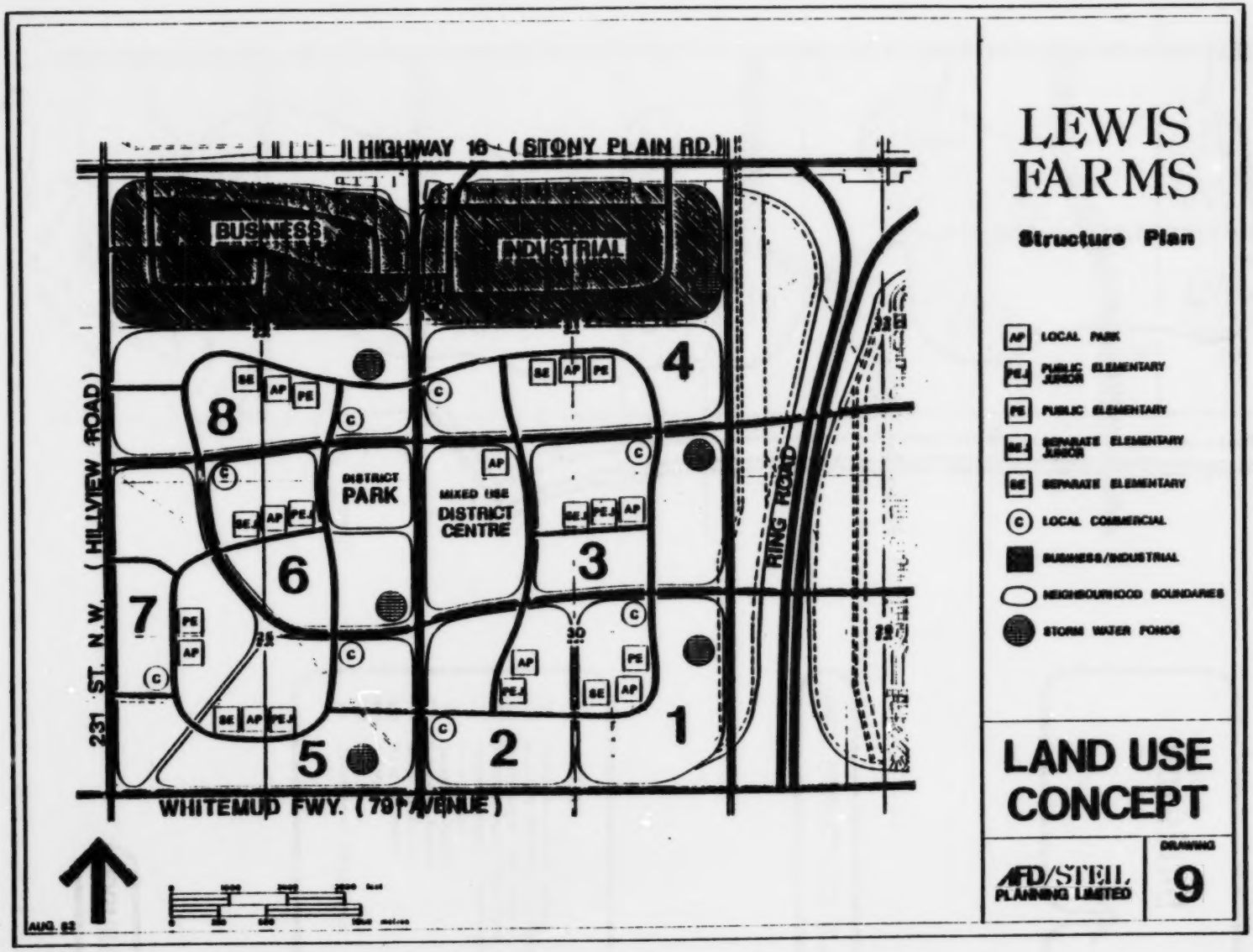


LEWIS FARMS

Structure Plan

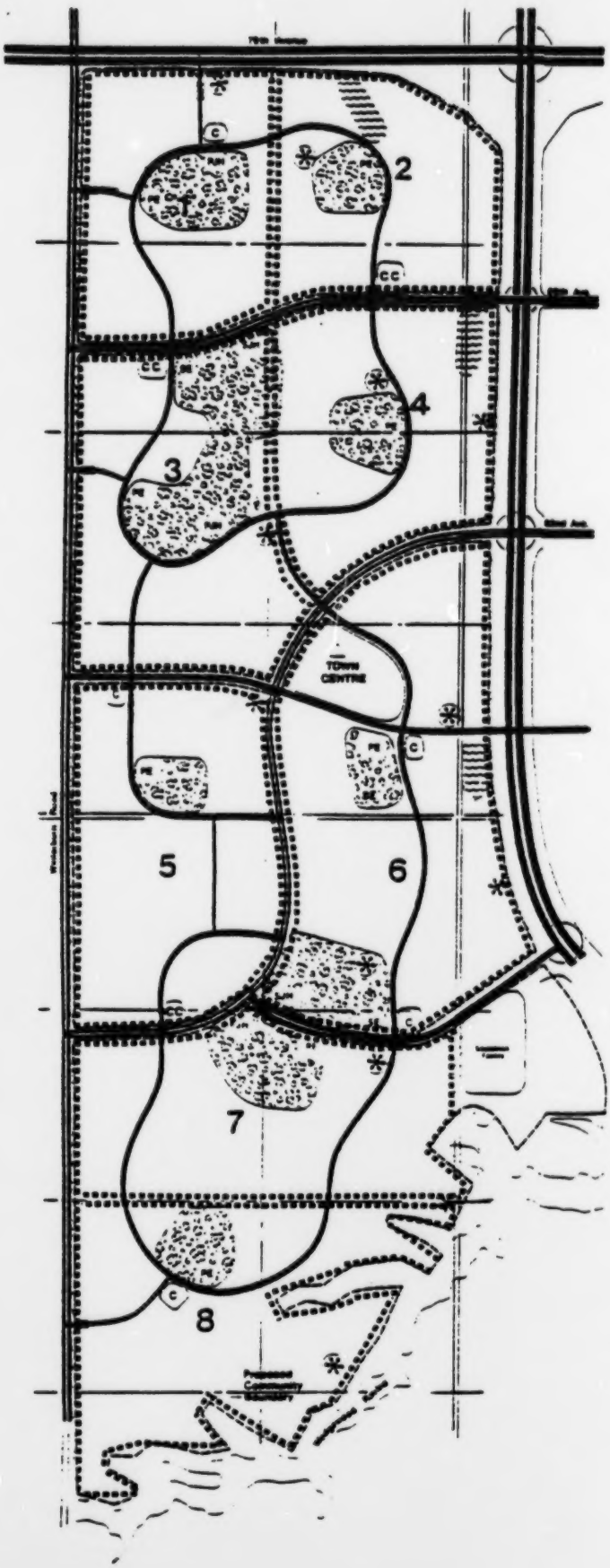
- AP LOCAL PARK
- PE-J PUBLIC ELEMENTARY JUNIOR
- PE PUBLIC ELEMENTARY
- SE-J SEPARATE ELEMENTARY JUNIOR
- SE SEPARATE ELEMENTARY
- C LOCAL COMMERCIAL
- BUSINESS/INDUSTRIAL
- NEIGHBOURHOOD BOUNDARIES
- STORM WATER PONDS

LAND USE CONCEPT

AFD/STEL PLANNING LIMITED

DRAWING 9

MAP 7



Parkland

AREA STRUCTURE PLAN

LEGEND

- Public Elementary School
- Separate Elementary School
- Public Junior High School
- Separate Junior High School
- Neighbourhood Commercial
- Town Centre
- Detention Facility
- Retention Facility
- Minor Collector
- Major Collector
- Arterial
- Ring Road
- cc Community Commercial

FIGURE 6

MAP 8